



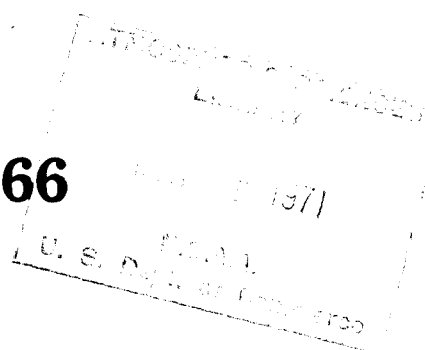
UNITED ARAB REPUBLIC

MONTHLY WEATHER REPORT

VOLUME 9

NUMBER 1

JANUARY, 1966



U.D.C. 551. 508,1 (62)

MINISTRY OF SCIENTIFIC RESEARCH — METEOROLOGICAL DEPARTMENT
CAIRO

National Oceanic and Atmospheric Administration

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PUBLICATIONS OF THE METEOROLOGICAL DEPARTMENT OF THE UNITED ARAB REPUBLIC—CAIRO

In fulfilment of its duties as the National Meteorological service for the U.A.R., the Meteorological Department issues several reports and publications on weather, climate and agrometeorology. The principal publications are described on this page.

Orders for publications should be addressed to :—

“The Director General, Meteorological Department, Kubri-el-Qubbeh—CAIRO”.

THE DAILY WEATHER REPORT

This report is printed daily in the Meteorological Department. It contains surface and upper air observations carried by the relevant networks of the Republic and made at the four main synoptic hours of observations (00, 06, 12 and 18 U.T.); as well as ship observations over the Eastern Mediterranean and north Red Sea made at the same times.

It also contains two surface synoptic charts at 00 and 12 U.T. and two upper air charts for the standard isobaric surfaces 700 & 500 mbs. at both 00 and 12 U.T.

In compliance with resolution 8 (EC-XIII) of WMO, foreign upper air data included in Cairo Subregional Broadcast are also given in this report.

THE MONTHLY WEATHER REPORT

First issued in 1909, the Monthly Weather Report served to give a brief summary of the weather conditions that prevailed over Egypt during the month, with a table showing the mean values for few meteorological elements and their deviations from the normal values. From 1954 to 1957 this report was in a rapid state of development and extension resulting into a voluminous report on January 1958 giving surface, upper air, and agro-meteorological data for U.A.R.

THE AGRO-METEOROLOGICAL ABRIDGED MONTHLY REPORT

Gives a review of weather experienced in the agro-meteorological stations of the U.A.R. as well as monthly values of certain elements.

THE ANNUAL REPORT

This report gives annual values and statistics for the various meteorological elements, together with a summary of the weather conditions that prevailed during all months of the year .

CLIMATOLOGICAL NORMALS FOR EGYPT

The normals, long averages and statistical data are given in one edition for stations in Egypt from the date of opening of each station up to 1945. A new voluminous edition was issued in March 1968 which brings normals and mean values up till 1960.



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FOREWORD

Since 1909 the Meteorological Department of Egypt has been issuing regularly the Monthly Weather Report, giving a brief summary of the weather conditions prevailing over Egypt during the month. These reports used to include a table giving limited climatological data for some selected surface observations.

On January 1954, the Monthly Weather Report has been revised and the general summary of the weather conditions has been extended to give a more detailed description of the synoptic situations and the associated weather prevailing during the month.

On February 1955 a further extension took place, the general summary of the weather conditions has been classified into different items to give more comprehensive information. More detailed surface climatological tables for selected stations and table for miscellaneous weather phenomena have been added to the Report.

On January 1956, the climatological tables included in the Report have been extended to include upper air climatological data to meet the increasing demand for this information.

In addition the full text of the monthly report of the standard observations taken at the Central Agro-Meteorological Station at Giza has been included in this Report instead of issuing it as a separate bulletin.

On January 1957, the Report has been completely revised, a new set of meteorological tables has been introduced to give, as far as possible, complete information for surface and upper air data from a more representative network of stations.

In addition, a general review of the observations taken in the fields of the plant breeding farm at Giza is included in the Report. The review gives a brief summary of the characteristic features of the different meteorological and micrometeorological elements of the month, more weight is given in this review to those elements which are of interest to agriculturists.

Starting from the Report of January 1958, the Monthly Weather Report for the U.A.R. included a detailed description of the synoptic situations and the associated weather experienced all over the Republic during the month. The Report included a new set of tables giving more detailed surface and upper air climatological data for selected stations in the Republic. The review of the Agrometeorological station at Giza and the normal observations made at the field of the station were also included in the Report.

As from January 1960, these tables have been totally revised and some new tables have been introduced to include more detailed climatological data.

In order to explain how the tables included in these Monthly Weather Reports have been compiled, detailed notes are included in the Report of January 1960 giving informations about the instruments used and their exposure, the methods of observations and the methods of computing the means and frequencies.

As from January 1964, the Monthly Weather Report was again totally revised. The number of meteorological stations appearing in the Report have been concentrated in the main synoptic stations working mostly continuously 24 hours. In addition

climatological data included in the Report will be confined to the montlly mean values, monthly totals, monthly frequencies and monthly absolute values. More specific climatological data have to be requested from the Meteorological Department.

Starting from the Report of January 1958, the monthly Weather Report of the U.A.R. carries serial reference in volume and number ; each year carries a serial number in volume, Number I, being for January and 12 for December. The reference number of January 1958 is volume I, number I.

Cairo, 20-6-1970

M. F. TAHA
Under Secretary of State
Director General
Meteorological Department

INTRODUCTION AND EXPLANATION OF THE TABLES

For the purpose of this Monthly Weather Report, the United Arab Republic is divided into six climatic districts as follows:—

Number	District	Number	District
I	Mediterranean Area	IV	Upper Egypt
II	Lower Egypt	V	Western Desert
III	Cairo Area	VI	Red Sea Area

The data included in Tables A1, A2, A3, A4 & A5, are based on surface observations made at a representative selection of the basic network of synoptic stations. The data included in Tables B1, B2 & B3 refer to Upper Air observations. The data included in Tables C1, C2, C3, C4 & C5, are based on observations taken at the Central Agro-Meteorological station at Giza and the Agro-Meteorological stations at Tahrir, El Kasr and Kharga. The observation field at Giza is divided into several plots, each of area about 400 to 600 square metres, two of these plots are used for standard observations running throughout the whole year, the first serves as a dry and bare field, the second as a wet field covered with grass (libia). The observation fields at Tahrir, El Kasr and Kharga are considered for the moment as dry and bare fields. At Kharga Oasis, the observation field is of the size of about 4000 - 6000 square metres.

The soil characteristics of these fields are:

	EL KASR	TAHRIR	GIZA	KHARGA
Top soil type	not available at present	Pure sand	Permeable clay	Sandy loam granular non-compact
Top soil depth	„	More than 3 metres.	More than 1.5 metres	20 cms.
Sub soil type	„	Pure sand	Clay loam and loam	Platy clay non-compact
Slope of ground and its direction	„	1/2 % towards East & North	Flat (0-0.3%)	Flat (0-0.3%)
Level of water table	„	More than 5 metres	1.0-1.5 m. approximately.	More than 5 metres

Except for the wind speed which is expressed in knots, the metric units are used throughout this report and are as follows :—

- The atmospheric pressure is expressed in millibars (one millibar = 1000 dynes per square centimetre = the pressure due to 0.7501 millimetre of mercury at 0°C at latitude 45°),
- Air and soil temperatures in degrees celsius (°C),
- Relative humidity (%),
- Rainfall in millimetres,
- Snow depth in centimetres,
- Duration of bright sunshine in hours,
- Sky cover in octas,
- Evaporation in millimetres,
- Altitude of pressure surface in geopotential metres,
- Mean wind speed of the whole day, and of the day - time and the night - time intervals in metres per second,
- (Solar + Sky) radiation in gram-calories per centimetre square,
- Vapour pressure in millimetres.

TABLE A1.— Monthly values of the Atmospheric Pressure, Air Temperature, Relative Humidity, Bright Sunshine Duration & Piche Evaporation

Atmospheric Pressure.

The monthly mean values of the daily atmospheric pressure corrected to Mean Sea Level (M.S.L.) are the arithmetic means over the month of their corresponding daily hourly values or of the daily observations taken at the 8 synoptic hours (00,03, 06, 09, 12, 15, 18 & 21 UT). The atmospheric pressure is measured by mercury barometers installed indoors; The Mean Sea Level Pressure (M.S.L.) is the barometer reading corrected for the height of the barometer cistern above or (below) the Mean Sea Level at the station. Corrections for index, temperature and latitude have been applied to the barometer readings before reduction to M.S.L. Deviations from normals appear besides monthly mean values in a separate column.

Air Temperature.

The monthly mean values of the maximum (A) and of the minimum (B) air temperatures are computed from their corresponding daily routine values observed over the month. The maximum (mercury) and the minimum (alcohol) thermometers are freely exposed in the louvered screens with their bulbs at a height of 160 to 170 centimetres above the ground. Deviations from normals appear besides monthly mean values.

The monthly mean values of $(A + B)/2$ are computed from their corresponding daily calculated values over the month.

The monthly mean values of the dry and of the wet bulb air temperatures are the arithmetic means over the month of their corresponding daily hourly values or of their corresponding values at the 8 synoptic hours (00,03, 06, 09, 12, 15, 18 & 21 UT). The dry and wet bulb thermometers used are of the mercury type and are freely exposed in sloping double roofed louvered screens with their bulbs at a height of 140-150 centimetres above the ground. Deviations from normals appear besides monthly mean values in a separate column.

Relative Humidity

The mean daily R. Humidity during the month is derived from the mean daily values of the dry and wet bulb temperatures using Jellink's Psychrometer Tables (Liepzing 1911). The mean daily values of the dry and wet bulb air temperatures are as indicated in the last paragraph. No corrections or wind speeds or atmospheric pressure are applied. Deviations from normals appear besides monthly mean values in a separate column.

Bright Sunshine Duration

The actual duration of bright sunshine for the month is the sum of the actual daily bright sunshine durations. The total possible duration for the month is the sum of the daily calculated periods between sunrise and sunset. In calculating the possible duration of sunshine for a given day, the period of cut-off for that day caused by obstacles, such as mountains are eliminated from the possible duration with an ideal flat horizon. In case of stations where the record of day or more is or are missing, the total actual duration is given between brackets and a note is added at the end of the table giving the actual number of records (days) used in summing up this total actual. In such cases the corresponding total possible duration is also given in brackets and it is the sum of the possible duration of the days of the available records. The percentage of the actual to the possible duration appears besides the total possible values in a separate column. The duration of bright sunshine is measured by the Campbell-Stokes sunshine recorders which are suitably exposed.

Evaporation (Piche)

The monthly mean value of Piche evaporation is computed from its daily routine values observed at 0600 UT over the month. Evaporation measurements are taken once daily at 0600 UT and give the evaporation for the previous 24 hours. The evaporation readings are measured by a Piche tube freely exposed in sloping double roofed louvred screens, the evaporation disc has an effective area of 10.1 centimetres square, white in colour, and at a height of 140-150 centimetres above the ground.

TABLE A2.—Maximum & Minimum Air Temperatures

Higher and lower limits of both maximum and minimum temperatures and their corresponding dates of occurrences during the month are extracted from the daily readings of maximum (mercury) and minimum (alcohol) thermometers respectively. These dates are included for actual occurrences up to three; when exceeding three, the symbol * is added beside the last three dates.

The number of days during the month with maximum air temperature above 25°C, 30°C, 35°C, 40°C & 45°C and with minimum air temperature below 10°C, 5°C, 0°C & —5°C are included also in this table under separate columns.

The types and exposure of the maximum and of the minimum thermometers are as indicated in the notes on table A1.

The monthly mean values of grass minimum temperatures are the arithmetic means over the month of their corresponding daily values. The grass minimum temperatures are measured by ordinary minimum (alcohol) thermometers suitably exposed in the open air at the station field on special stands with their bulbs at a height of 5 centimetres above ground just touching the grass tops if there is any. Grass minimum thermometers readings are taken daily as a routine base at 0600 U.T. Deviations from normals appear besides mean values in a separate column.

TABLE A3.—Sky Cover & Rainfall

The monthly mean values of the total sky cover at the principal hours (00, 06, 12 & 18 UT) are computed from their corresponding daily routine values observed during the month. Mean values of the daily total sky cover is the arithmetic mean over the month of the daily hourly values or of the daily observations taken at the 8 synoptic hours (00, 03, 06, 09, 12, 15, 18 & 21 U.T). Sky cover is in octas.

The monthly total rainfall is the total rainfall during the month. The maximum daily rainfall and the number of days with rain < 0.1 and more than or equal 0.1, 1, 5, 10, 25 & 50 mms are extracted from the routine daily rainfall totals during the month. The rainfall for a given day is the amount of rain which has fallen during the 24 hours commencing at 0600 U.T. of that day; when the amount of rain which has fallen is not large enough to be measured (less than 0.1 mm) the term "Trace" is entered as (Tr.). The amount of rainfall measured includes the water equivalent of the rain water which has frozen after falling and the water equivalent of solid precipitation if any such as hail. Dates of maximum rain in 24 hours are included for actual occurrences up to three; when exceeding three, the symbol* is added besides the last three dates.

The amount of rainfall is normally measured by ordinary rain gauges. Some selected stations are also equipped with a recording type of rain gauge. The rim of both types of gauges are at a height of 90-100 centimetres above the ground.

TABLE A4.— Number of Days of Occurrence of Miscellaneous Weather Phenomena

This table gives the number of days of occurrence of rain, snow, ice pellets, hail, frost, thunderstorm, mist, fog, haze, thick haze, dust or sandrising, dust or sandstorm, gale, clear sky & cloudy sky. Except for rain (see notes on table A3) the days of occurrence of these weather phenomena are those days during which the phenomenon has occurred at any time between 2200, and 2200 U.T.

In compiling this table, the terminology and definitions of these different weather phenomena are as follows.

— A day of rain is the day during which the total amount of rainfall is 0.1 millimetre or more.

— A day of snow is the day during which snow or snow flakes or snow showers is or are observed even if it is or (they are) so small in quantity as to yield no measurable amounts of precipitation in the rain-gauge.

— A day of ice pellets is the day during which ice pellets are observed even if they are so small in quantity as to yield no measurable amounts of precipitation in the rain-gauge.

— A day of hail is the day during which either one or more of the following types of precipitation is or are observed, even if they are so small in quantity as to yield no measurable precipitation in the rain-gauge :

- Soft hail
- Small hail
- Hail stone

— A day of frost is the day during which frost is observed at the station.

— A day of thunderstorm is the day during which thunder is heard at the station whether lightning is seen or not. A day on which lightning is seen but thunder is not heard at the station is not counted as a day of thunderstorm.

— A day of mist is the day during which the surface horizontal visibility at the station has deteriorated and became equal to or greater than 1000 metres due to mist.

— A day of fog is the day during which the surface horizontal visibility at the station has deteriorated and fell below 1000 metres due to fog.

— A day of haze is the day during which the horizontal visibility at the station has deteriorated and became equal to or greater than 1000 metres due to haze.

— A day of thick haze is the day during which the horizontal visibility at the station has deteriorated and fell below 1000 metres due to thick haze.

— A day of dust or sandrising is the day during which the horizontal visibility at the station has deteriorated and became equal to or greater than 1000 metres due to dust or sandrising.

— A day of dust or sandstorm is the day during which the horizontal visibility at the station has deteriorated and fell below 1000 metres due to dust or sandstorms.

— A day of gale is the day during which the mean surface wind speed reached or exceeded 34 knots at the station for at least 10 minutes.

— A day of clear sky is the day on which the mean cloud amount at the station is less than 2/8.

— A day of cloudy sky is the day on which the mean cloud amount at the station is 6/8 or more

As regards the last two items above, the mean cloud amount for a day is the mean of the 24 hours, the 8 synoptic hours or the 4 main synoptic hours of cloud observations according to the number of the routine observations taken at the station.



TABLE A5.— Number in Hours of Occurrences of Concurrent Surface Wind Speed and Direction Recorded Within Specified Ranges.

The elements used in preparing this table are the mean hourly values of the surface wind speed and the corresponding mean hourly values of direction taken from the daily records of the surface wind instruments installed at the station. These mean hourly values are extracted for every hour of each day of the month and they refer to a period of 60 minutes centred at the hour.

The number in hours of occurrences of the surface wind falling within the ranges of speed and direction indicated in the table is the number of cases when the mean hourly values of the surface wind, as defined have satisfied these ranges.

The number in hours of "variable" winds is the number of cases where the surface wind showed no definite direction over the period of the 60 minutes centred at the hour or when the wind vane was sticking over that period due to the lightness of the wind and not responding to the variation in wind direction; in such cases the mean wind speed over this period is normally less than 5 knots. The number in hours of "calm" winds is the number of cases where the surface wind has a mean speed of less than one knot over that period, whatever the mean wind direction over the same period is. The number in hours during which the recording instrument failed to record over the whole month is given under a separate column.

The instruments used for recording the surface wind are of the Dines Pressure Tube Anemograph.

This table follows the general lines of Model B of chapter 12 part IV of the WMO Technical Regulations 1959. The ranges of wind speed are (1-10), (11-27), (28-47) knots and 48 knots or more; the ranges for wind direction are twelve ranges of 30° each, beginning with the range (345°-014°) as being the true north.

This table gives the following data :

- The total number in hours of simultaneous occurrences of surface wind satisfying the specified ranges of speed and direction during the month,
- The total number in hours of occurrences of surface wind satisfying the specified ranges of speed during the month irrespective of their direction,
- The total number in hours of occurrences of surface wind blowing from the specified ranges of direction during the month irrespective of their speed.

TABLE B1.—Upper Air Climatological Data

The routine upper air observations are taken at 0000 and 1200 U T, a separate table of this type is prepared for each hour. The number of cases the height of each of the pressure surfaces indicated in the table has been attained during the month, and the number of cases the temperatures and the dew points have been observed at each of these surfaces are given in the table against each element under column (N).

The monthly mean values of the altitude, temperature and dew point at each of these pressure surfaces are the arithmetical means of the corresponding daily values over the number of cases (N) indicated against each element.

The instruments used are of the radiosonde modulating frequency recording type; the types of transmitters used do not need to apply any corrections for radiation.

This table follows the general lines recommended by the commission for climatology of the World Meteorological Organization Rec. 34 (CCL-1); it gives the following data for the hour of observation indicated at the top of the table :

- The number of cases the height of each of the pressure surfaces has been attained during the month and the number of cases the temperature and dew point at these surfaces have been observed,
- The monthly mean values of the atmospheric pressure corrected to the ground level of the station (H); the highest and lowest values of this pressure observed during the month,
- The monthly mean values of the air temperature and of the dew point at the surface; the highest and lowest values of the surface air temperature observed during the month,
- The monthly mean, the highest and the lowest values of the altitude for each of the pressure surfaces,
- The monthly mean, the highest and the lowest values of air temperature; and the mean dew point at each of the pressure surfaces.

TABLE B2.— Mean and Extreme Values of the Freezing Level and the Tropopause; The Highest Wind Speed in the Upper Air.

The routine upper air observations are taken at 0000 and 1200 UT ; a separate table of this type is prepared for each hour as indicated in the notes on table B1. The number of cases the altitude of the freezing level and of the first tropopause have been attained during the month and the number of cases the pressures and the dew points or temperatures have been observed at these levels are given in the table against each element in the (N) box.

The monthly mean values of the altitudes of the freezing level and of the first tropopause and the monthly mean values of the pressures and of the dew points or temperatures at each of these levels are the arithmetical means of the corresponding daily values over the number of cases (N) indicated in the box of each element.

The first tropopause is determined in accordance with the definition adopted by the Executive Committee of the World Meteorological Organization Resolution 21 (Ec - IX).

This table is based on wind observations taken by the SCR — 658 or the Metox radiotheodolites working simultaneously with the radiosonde observations. The types of radiosonde instruments used are given in the notes on table B1.

This table gives the following data for each hour of observation indicated at the top of the table:

- The number of cases the freezing level has been attained during the month and the number of cases the pressure and dew point have been observed at this level.
- The number of cases the altitude of the first tropopause has been attained during the month and the number of cases the pressure and the temperature have been observed at this level,
- The monthly mean values of the altitude, pressure and dew point of the freezing level,
- The altitudes, pressures and dew points of the highest and lowest freezing level observed during the month,
- The monthly mean values of the altitudes, pressures and temperatures of the first tropopause,
- The altitudes, pressures and temperatures of the highest and lowest first tropopause observed during the month,
- The direction and speed of the highest wind speed observed during the month, the altitude at which this wind has been observed.

TABLE B3.—Number of Occurrences of Wind Direction Within Specified Ranges and the Mean Scalar Wind Speed at the Standard and Selected Pressure Surfaces

The routine upper air observations are taken at 0000 and 1200 U.T. A separate table of this type is used for each station.

The mean scalar wind speed "ffm" of winds blowing from each range of directions at a given pressure surface, is the arithmetical mean of the corresponding daily values of wind speed for the number of cases "N" during the month.

The term "Calm" is used in this table to denote wind speed of less than one knot.

This table is based on the wind observations taken at the station as indicated in the notes on table B2.

This table, as in the case of table B1, follows the general lines recommended by the commission for Climatology of the World Meteorological Organization REC. 34 (CCL-I) ; the ranges of wind direction used are twelve ranges of 30° each beginning with the range (345°—014°) as being the true north. It gives the following data for the hour of observation indicated :

— The number of cases (N) the wind has been observed from the specified ranges of direction at the surface of the station and at the different pressure surfaces during the month.

— The total number of cases (TN) the wind has been observed at the surface of the station and at the different pressure surfaces during the month irrespective of the wind direction,

— The mean scalar wind speeds (ffm) blowing from the specified ranges of direction at the surface of the station and at the different pressure surfaces,

— The number of cases of "calm" winds at the surface of the station and at the different pressure surfaces,

— The mean scalar wind speeds at the surface of the station and at the different pressure surfaces blowing from all directions.

AGRO-METEOROLOGICAL DATA

Reviews of Agro-Meteorological Stations at El Kasr, Tahrir, Giza, & Kharga.

The monthly review of all agro-meteorological elements that have been observed at each agro-meteorological station includes a general summary of pronounced weather phenomena that prevailed during the month, together with a comparison between the monthly values of this year and last year of specified elements that are of great interest to agriculturists as well as to agrometeorologists. For some elements when observations are of a long time, departure from normal values appears also in the monthly review.

During winter, the monthly review includes normally the days of air temperature below 0°C at the height of five centimetres above the top of grass (Libia). The records of a mercury in steel recording thermometers are used for this purpose ; the sensitive part of the instrument is exposed in the open air and is mounted on a wooden support at the height indicated.

TABLE C1.—Air Temperature at 2 metres Above Ground.

The monthly mean values of the maximum, minimum, night time mean and day time mean, mean of day of air temperatures are the arithmetic means over the month of their corresponding daily values. The mean air temperature of the day is the mean of the hourly values of the dry bulb temperatures during the day. The night—time mean air temperature of the day is obtained graphically to the nearest whole degree from the charts of recording thermometers for the period from sunset of the previous day to sunrise of that day; the day-time mean temperature is similarly obtained for the period from sunrise to sunset of the same day. The duration of air temperatures above a specified limit of temperature is obtained graphically from the same charts, daily to the nearest half hour.

The maximum (mercury), the minimum (alcohol) and the dry bulb (mercury ventilated) thermometers are freely exposed in sloping double roofed louvred screens with their bulbs at a height 210 (for the dry bulb) and 225–235 (for the maximum and minimum) centimetres above ground; the recording thermometer used is of the bi-metallic type and is exposed in a similar screen; the height of the bi-metallic piece is 210 centimetres approximately above the ground.

TABLE C2.—Extreme Values of Maximum & Minimum Air Temperatures at 2 metres above Ground, Absolute Minimum Air Temperature at 5 cms above Ground over Different Fields

The extreme values of maximum and minimum air temperatures at 2 metres above ground and of minimum air temperatures at 5cms above ground over dry and grass fields are extracted from their corresponding daily routine values. Dates of occurrences are included in separate columns beside the extreme value. Extreme values of maximum & minimum air temperature at 2 metres include the highest & lowest limits of the daily corresponding routine values during the month. The types and exposures of the minimum thermometers used over the different fields are as in the case of the grass minimum referred to in notes on the table A2.

TABLE C3.—(Solar + Sky) Radiation, Duration of Bright Sunshine, Relative Humidity, Vapour Pressure at 2 metres above Ground, Evaporation & Rainfall.

The monthly total values of the (Solar + Sky) Radiation, Bright sunshine duration, Evaporation & Rainfall are the sums of their corresponding daily values for the month. The monthly mean values of the (Solar+Sky) Radiation, Relative Humidity, Vapour Pressure at 2 metres & Evaporation are the arithmetic means of their corresponding daily values for the month respectively.

The (Solar + Sky) radiation is obtained from the records of a Robitzsch Actinograph; the Robitzsch values at Giza and Tahrir are regularly compared with the records of an Eppley pyrliometer. The sensitive elements of the Robitzsch Actinograph and of the Epply pyrliometer are at 100 cms approximately above the ground.

The types of instruments used for the measurement of the duration of bright sunshine, their exposure and the evaluation of the durations are as given in the notes on table A 1.

The duration of the relative humidity above 90% and above 80% are given to the nearest hour and are obtained graphically from the records of a hair hygrograph exposed in a sloping double roofed louvred screen at a height of 210 centimetres approximately above ground.

The relative humidity is derived from the readings of ventilated dry and wet bulb mercury thermometers freely exposed in the same screen, using the Aspirations—Psychrometer-Taflen of the Deutschen Wetter Dienst 1955; the height of the bulbs is 210 centimetres approximately above the ground. The mean relative humidity of the day is the mean of the hourly values observed during day.

The vapour pressure values are derived from the same Aspiration Psychrometer tables. The mean of the day of the vapour pressure is the mean of the hourly values computed during day.

Evaporation measurements are taken once daily at 0600 UT from a Piche tube and also a class "A" evaporation pan and give the evaporation for the previous 24 hours. The Piche tube is freely exposed in the open air at a height of 120 centimetres above dry soil ; the colour and effective area of the evaporation disc are as given in the notes on table AI. The class "A" evaporation pan is of the type recommended by the Commission of Instruments and methods of Observation of the World Meteorological Organization Rec. 42 (CIMO-56) ; it is of a cylindrical shape, 25.4 centimetres deep, 120.6 centimetres in diameter (inside dimensions). The pan is freely exposed in the open air in the wet field covered with grass (libia), at Giza and in the dry field elsewhere ; its rim at a height of 41 centimetres above ground away from obstacles such as buildings or trees.

The types of instruments used for measuring the amount of rainfall, their exposure and the evaluation of these amounts are given in the notes on table A3.

TABLE C4.—Extreme Soil Temperature at Different Depths in Different fields. (cms.)

The highest and lowest values of soil temperatures at the selected depths in dry & grass covered fields are extracted from their corresponding daily routine values.

The soil temperature readings are taken in the different fields at the specified depths ranging from 0.3 cm to 300 cms. in each field as indicated in the table. These readings are taken regularly according to the following schedule :

- Daily at 0000 U.T., 0200 U.T and every 2 hours for the 0.3, 1, 2 and 5 centimetres depths.
- Daily at 0000 U.T., 0300 U.T and every 3 hours for the 10 and 20 centimetres depths.
- Daily at 0000, U.T., 0600, U.T and every 6 hours for the 50 centimetres depth.
- Daily at 0600, 1800 U.T. for the 100 centimetres depth.
- Daily at 1000 U.T. for the 200 centimetres depth.
- Once every 3 days at 0800 U.T. for the 300 centimetres depth.

The thermometers used are of the Fuess or the Friedrich types.

TABLE C5.—Surface Wind

The monthly values of the daily mean, the night time mean and of the day time mean of the surface wind speed is the arithmetic mean of their corresponding daily evaluated values for the month respectively. The mean wind speed of the day is computed for the period of 24 hours from 1600 UT of the previous day ; the night-time mean wind speed of the day is obtained from the total run of air during the period 1600 UT of the previous day to 0600 UT of that day ; the day-time mean is similarly computed for the period 0600 to 1600 UT of the same day. The type of the wind instrument used is of the run counter of the Lambrecht type ; the cups of which are at 2 metres above the ground.

The number of days with surface wind speed reaching or exceeding specified values of velocities (≥ 10 knots, ≥ 15 knots, ≥ 20 knots, ≥ 25 knots, ≥ 30 knots, ≥ 35 knots and ≥ 40 knots) for at least 5 minutes at any time between 2200 & 2200 UT irrespective of its direction are extracted from the daily routine analysis of surface wind records during the whole month. The daily records of the Dine Pressure Tube Anemograph are used, the highest gust refer to the highest excursive made by the velocity pen on the records during the month

LIST OF STATIONS APPEARING IN THE REPORT — SYNOPTIC AND CLIMATOLOGICAL STATIONS

District.	Station	Index Number II iii	Latitude °N	Longitude °E	Elevation of the ground in metres (H or Ha)	Altitude of the Station in metres (Hp)	Altitude of the barometer Cistern in metres	Height of Wind recording instruments (metres) above		Synoptic Observations								Upper air observations P (Pilot Balloon) W (Radio wind) R (Radio Sonde)	Remarks
								above building	above ground	00	03	06	09	12	15	18	21		
Mediterranean	Sallum	62 300	31 32 25 11	4.0	6.0	5.2	—	—	—	x	x	x	x	x	x	x	x	H	P
	Mersa Matruh . . . (A)	306	31 20 27 13	28.3	30.0	30.0	8	15	15	x	x	x	x	x	x	x	x	H	RW
	Alexandria (A)	318	31 12 29 57	— 3.4	7.0	6.8	10	18	18	x	x	x	x	x	x	x	x	H	P
	Port Said (A)	333	31 17 32 14	1.9	6.1	6.1	10	19	19	x	x	x	x	x	x	x	x	H	P
	El Arish	336	31 07 33 45	15.0	17.1	17.1	10	15	15	x	x	x	x	x	x	x	x	H	P
	Ghazza	338	31 30 34 27	9.7	15.7	15.7	10	18	18	x	x	x	x	x	x	x	x	H	P
Lower Egypt	Tanta	348	30 47 31 00	14.0	14.8	15.4	10	14	14	—	—	x	x	x	x	x	—	H	—
Cairo Area	Cairo (A)	366	30 08 31 34	94.7	74.5	74.0	14	18	18	x	x	x	x	x	x	x	x	h	—
	Helwan	378	29 52 31 20	139.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	RW
Upper Egypt	Fayoum	381	29 18 30 51	22.0	23.3	23.2	10	14	14	—	—	x	x	x	x	x	—	H	—
	Minya (A)	387	28 05 30 44	29.0	40.0	44.2	7	10	10	x	x	x	x	x	x	x	x	H	P
	Assyout (A)	393	27 11 31 06	71.0	69.6	69.5	15	20	20	x	x	x	x	x	x	x	x	H	P
	Luxor (A)	405	25 40 32 42	94.9	88.5	88.4	7	15	15	x	x	x	x	x	x	x	x	H	P
	Aswan (A)	414	23 58 32 47	200.0	193.5	200.0	10	14	14	x	x	x	x	x	x	x	x	H	RW
Western Desert	Siwa	417	29 12 25 29	—15.0	—13.5	—13.3	10	17	17	x	x	x	x	x	x	x	x	H	P
	Bahariya	420	28 20 28 54	128.0	129.5	129.6	—	—	—	x	x	x	x	x	x	x	x	H	P
	Farafra	423	27 03 27 58	90.0	91.8	92.1	—	—	—	x	x	x	x	x	x	x	x	H	P
	Dakhla	432	25 29 29 00	110.0	111.5	111.5	10	15	15	x	x	x	x	x	x	x	x	H	P
	Kharga	435	25 27 30 32	77.8	72.8	78.8	—	—	—	x	x	x	x	x	x	x	x	H	P
Red Sea	Tor	459	28 14 33 37	2.2	4.2	2.2	—	—	—	x	x	x	x	x	x	x	x	H	P
	Hurghada	462	27 17 33 46	1.0	2.8	2.8	8	12	12	x	x	x	x	x	x	x	x	H	P
	Quesir	465	26 08 34 18	8.0	11.3	11.3	12	15	15	x	x	x	x	x	x	x	x	H	P

GENERAL SUMMARY OF WEATHER CONDITIONS

JANUARY 1966

Generally cold, occasionally sandy on the 1st & 2nd. Light rainy in the north during the 1st & 3rd decades with occasional thunderstorms between the 28th & 30th. Generally misty in the early morning over Delta, Canal & Cairo Areas.

GENERAL DESCRIPTION OF WEATHER

The prevailing weather this month was generally cold intervened with a rather warm period during the fourth week. Light/moderate rain fell in general over scattered localities of the northern parts mostly during the 1st and 3rd decades. As an exception rain was heavy and associated with thunderstorms in particular between 28th & 30th, while it penetrated southward as far as Beni-Suef on the 25th & 29th. On the first & second days occasional widespread rising sand was experienced over scattered localities of the Republic, while on the 27th sandstorms overrun the West Mediterranean coast and its coastal strip. Early morning mist & fog developed frequently over scattered localities of the Delta, Canal & Cairo Areas particularly during the 2nd decade.

PRESSURE DISTRIBUTION

The outstanding pressure distributions over the surface map this month can be summarized in the follownig pressure systems.

— The Anticyclonic ridge of the Atlantic high over West Europe, West Mediterranean and its extension eastwards through the Mediterranean and North Africa.

— The Anticyclonic ridge of the Siberian high over south west Russia and its extension southwards over Arabia.

— The deep Atlantic travelling low pressure systems through Urasia eastwards or NE wards.

— The transitory secondary depressions through the Mediterranean from the west to the east.

On the other hand, the prevailing pressure distribution at the 700mb & 500 mb levels were confined in two deep upper lows over north Atlantic & north Siberia, oscillatory upper secondary low in middle latitudes and an upper high pressure belt beneath 30°N.

The oscillatory upper low pressure system in middle latitudes appeared over Southern Europe and was associated with upper troughs (extending southward through the Mediterranean) which traversed East Mediterranean round the 2nd, 9th, 11th, 14th, 19th, 23rd, 25th, 29th & 31st.

Five of these troughs (that passed round the 2nd, 9th, 25th, 29th & 31st) were sharp and well defined, while the other four were rather flat and of no southern extension.

The Mediterranean transitory secondary depressions were tilted northward and followed rather eastward or north eastward tracks with elongated southern troughs skirting Asia Minor and traversing East Mediterranean round the 2nd, 5th, 15th, 20th, 23rd & 28th. The first two secondary depressions appeared over the Balkans as secondaries to the deep & far northern travelling primaries through Urasia. They attained Greece round the 1st & 4th respectively, proceeded eastwards through Asia Minor and traversed East Mediterranean round the 2nd & 5th respectively. The next two Mediterranean secondary depressions originated over West Mediterranean round the 12th & 15th respectively, then

proceeded rapidly eastward, attained Balkans by the 13th & 18th respectively. Then they shot rapidly NE wards towards the Black Sea with their southern troughs traversing East Mediterranean round the 15th & 20th respectively. The last two Mediterranean secondary depressions developed over West Mediterranean round the 20th & 26th respectively. They preceded SE wards, attained Greece round the 22nd & 27th respectively and rapidly traversed Asia Minor eastwards. Then they penetrated East Mediterranean round the 23rd & 28th respectively.

The barometric pressure over East Mediterranean in general and the UAR in particular was subnormal with the exception of the period (10th—15th) during which high pressure operated over North Africa and East Mediterranean.

The highest wind speeds in the upper air at Mersa Matruh, Helwan & Aswan were 186, 148 & 160 knots on the 30th, (12th & 17th) and 31st respectively.

SURFACE WIND

The prevailing winds were W ly & SW ly, light/moderate in general. Occasionally fresh/strong winds blew over scattered localities particularly the Mediterranean (west parts), Lower Egypt (Canal zone), Cairo and Red Sea districts. Calms were frequent most night time and early morning intervals over scattered localities.

TEMPERATURE

Maximum temperature was generally subnormal apart from the period (15th — 25th) during which it was slightly above normal.

Its values ranged between 15°C & 25°C over the northern and middle parts of the Republic and between 18°C & 29°C over the southern parts.

The absolute maximum temperature for the Republic was 32.3°C reported at Aswan on the 1st.

Minimum temperature was rather subnormal with the exception of scattered localities where it was changeable round its normal. Its values ranged between 4°C & 14°C in the northern & middle parts and between 0°C & 10°C in the southern parts. Over the Western Desert district minimum temperature fell below 0°C for many days during the 2nd & 3rd weeks.

The absolute minimum temperature of the Republic was —3.9°C reported at Dakhla on the 14th.

PRECIPITATION

This month was characterized with two rainy periods in the 1st & 3rd decades respectively. During the 1st decade rain was light and confined to the Mediterranean coastal strip. During the 3rd decade rain was light/moderate in general and confined to the northern & middle parts, but as an exception it was heavy in particular between the 28th & 30th and was associated with thunderstorms. On the 25th & 29th it penetrated in the south till Beni Suef. The monthly rain was changeable, partly abnormal and partly subnormal in most districts.

The maximum monthly rain fell for the Republic was 50.0mms. reported at Rosetta, while the maximum daily rainfall was 21.9 mms. reported at Mersa Matruh on the 30th.

M. F. TAHA

UNDER SECRETARY OF STATE

DIRECTOR GENERAL

METEOROLOGICAL DEPARTMENT

Cairo 20/6/1970

**Table A 1. — MONTHLY VALUES OF THE ATMOSPHERIC PRESSURE, AIR TEMPERATURE,
RELATIVE HUMIDITY, BRIGHT SUNSHINE DURATION & PICHE EVAPORATION.
JANUARY — 1966**

STATION	Atmospheric Pressure (mbs) M.S.L		Air Temperature °C								Relative Humidity %		Bright Sunshine Duration (Hours)			Piche Evaporation mms. Mean	
			Maximum		Minimum		A + B 2	Dry Bulb		Wet Bulb							
	Mean	D.F Normal or Average	(A) Mean	D.F Normal or Average	(B) Mean	D.F Normal or Average		Mean	D.F Normal or Average	Mean	D.F Normal or Average	Mean	D.F Normal or Average	Total Actual	Total Possible		%
Sallum	1014.9	— 2.6	19.7	+ 0.8	9.4	+ 0.2	14.6	14.2	0.0	9.6	— 0.7	51	— 7	—	—	—	9.2
Mersa Matruh (A)	1015.6	— 1.8	19.1	+ 0.9	8.4	+ 0.1	13.8	13.2	+ 0.3	9.4	— 0.4	57	— 8	—	—	—	9.5
Alexandria . . (A)	1016.2	— 1.5	19.8	+ 1.3	7.9	— 1.4	13.8	13.3	— 0.3	10.2	— 0.8	65	— 5	205.6	322.3	64	3.9
Port Said . . (A)	1016.4	— 1.0	18.3	+ 0.2	11.1	— 0.3	14.7	14.3	0.0	11.5	— 0.4	70	— 2	233.7	322.3	73	4.3
El Arish	1017.0	— 0.7	20.0	+ 0.7	9.2	+ 0.7	14.6	13.9	+ 0.2	11.0	0.0	68	— 3	—	—	—	4.5
Ghazza	1016.8	— 1.0	19.3	+ 1.4	9.5	+ 0.1	14.4	14.1	+ 0.4	11.1	— 0.2	67	— 6	228.5	321.1	71	4.4
Tanta	1016.1	— 1.3	20.3	+ 0.6	7.7	+ 1.5	14.0	13.2	+ 0.6	9.5	— 0.5	59	— 11	229.2	323.4	71	4.3
Cairo (A)	1017.2	— 0.8	19.8	+ 0.8	9.5	+ 0.7	14.6	14.3	+ 0.5	9.3	— 0.8	48	— 11	—	—	—	10.5
Fayoum	1017.8	— 0.5	21.1	+ 0.7	6.8	+ 0.5	14.0	13.1	— 0.2	8.8	— 1.1	52	— 9	—	—	—	4.1
Minya (A)	1018.2	— 0.4	21.3	+ 0.6	3.7	— 0.3	12.5	11.8	— 0.1	7.6	— 0.6	51	— 7	294.0	328.8	89	5.4
Assyout (A)	1018.0	— 0.5	21.2	+ 0.4	6.3	— 0.5	13.8	13.4	— 0.2	8.0	— 0.4	42	— 4	—	—	—	8.0
Luxor (A)	1017.5	+ 0.4	23.7	+ 0.6	4.9	— 0.7	14.3	14.0	— 0.2	9.1	— 0.4	48	— 4	—	—	—	5.4
Aswan (A)	1017.2	+ 0.2	24.2	0.0	7.0	— 1.4	15.6	15.7	— 0.3	8.7	— 0.4	32	— 1	—	—	—	9.2
Siwa	1017.3	— 1.4	20.3	+ 0.6	5.3	+ 1.0	12.8	12.3	+ 0.4	7.7	— 0.2	48	— 4	—	—	—	7.0
Bahariya	1018.1	— 0.5	21.1	+ 1.1	4.4	— 0.1	12.8	12.4	— 0.4	7.2	— 1.1	42	— 8	—	—	—	6.6
Farafra	1019.4	— 1.1	21.1	+ 0.3	2.4	— 2.0	11.8	11.4	— 1.2	6.7	+ 0.1	44	+ 2	—	—	—	7.4
Dakhla	1019.0	+ 0.9	22.4	+ 0.9	6.3	+ 2.0	14.4	11.3	— 1.2	6.2	— 0.8	40	+ 3	—	—	—	7.0
Kharga	1017.9	— 0.1	22.8	+ 1.6	5.0	— 0.9	13.9	13.9	— 0.3	7.5	— 1.3	38	— 7	314.9	334.2	94	7.9
Tor	1016.9	— 0.2	22.1	+ 1.0	9.3	+ 0.3	15.7	15.8	0.0	10.6	— 0.7	48	— 11	—	—	—	9.6
Hurghada	1016.4	— 0.3	22.3	+ 1.5	9.3	— 0.4	15.8	15.9	0.0	10.2	— 0.8	44	— 8	—	—	—	12.1
Quseir	1016.9	+ 0.4	22.7	+ 0.1	13.0	— 0.8	17.8	18.1	— 0.2	12.2	— 0.7	45	— 4	—	—	—	11.7

Table A2.— MAXIMUM AND MINIMUM AIR TEMPERATURES

JANUARY — 1966

Station	Maximum Temperature °C									Grass Min. Temp.		Minimum Temperature °C								
	Highest	Date	Lowest	Date	No. of Days with Max-Temp.					Mean	D. From Normal	Highest	Date	Lowest	Date	No. of Days with Min. Temp.				
					>25	>30	>35	>40	>45							<10	<5	<0	<-5	
Sallum	26.3	21	14.9	7	1	0	0	0	0	8.6	—	15.4	20	3.9	7	20	1	0	0	
Mersa Matruh . . . (A)	25.8	21	13.7	7	1	0	0	0	0	—	—	13.3	21	4.4	8	22	1	0	0	
Alexandria (A)	27.7	22	16.0	8	1	0	0	0	0	—	—	11.8	25	3.6	17	26	4	0	0	
Port Said (A)	26.3	22	15.2	8	1	0	0	0	0	9.6	—	14.6	1	8.5	10	10	0	0	0	
El Arish	27.5	22	14.2	11	2	0	0	0	0	7.3	—	15.1	1	4.7	16	18	1	0	0	
Ghazza	26.2	22	15.0	11	1	0	0	0	0	8.1	—	15.6	1	6.5	11	17	0	0	0	
Tanta	27.5	22	15.9	8	1	0	0	0	0	—	—	12.8	22	3.2	13	23	7	0	0	
Cairo (A)	26.2	22	15.6	8	1	0	0	0	0	—	—	15.8	22	5.1	13	18	0	0	0	
Fayoum	28.6	22	16.8	8	2	0	0	0	0	2.1	—	11.6	1	3.1	8,14	27	7	0	0	
Minya (A)	27.2	22	16.7	11	3	0	0	0	0	0.8	—	9.3	1	0.5	14	31	23	0	0	
Assyout (A)	27.7	25	16.5	8	6	0	0	0	0	4.1	—	11.6	1	2.5	11	28	7	0	0	
Luxor (A)	30.5	1	18.2	11	13	1	0	0	0	3.9	—	11.4	21	1.9	16	30	19	0	0	
Aswan (A)	32.3	1	17.6	12	13	1	0	0	0	—	—	15.5	1	2.2	11	28	5	0	0	
Siwa	26.6	21	15.0	7	4	0	0	0	0	3.4	—	12.3	6	-0.9	13	28	14	2	0	
Bahariya	28.5	22	16.6	9	4	0	0	0	0	3.4	—	11.7	25	-0.4	11	29	16	2	0	
Farafra	28.4	22	16.0	11	5	0	0	0	0	1.8	—	9.7	28	-2.4	12	31	23	9	0	
Dakhla	29.3	22	16.7	11	6	0	0	0	0	—	—	9.0	1	-3.9	14	31	27	15	0	
Kharga	28.7	22	17.2	11	9	0	0	0	0	2.8	—	15.0	1	1.2	15	30	14	0	0	
Tor	27.2	1	17.8	1	5	0	0	0	0	—	—	17.8	1	5.0	9	22	0	0	0	
Hurghada	25.5	22	18.4	10	2	0	0	0	0	7.9	—	14.9	1	6.7	16	23	0	0	0	
Quseir	26.5	29	19.0	10	4	0	0	0	0	11.2	—	16.6	1	9.0	11	2	0	0	0	

Table A 3.—SKY COVER AND RAINFALL

JANURAY — 1966

Station	Mean Sky Cover Oct.					Rainfall mms.										
	00 U.T.	06 U.T.	12 U.T.	18 U.T.	Daily Mean	Total Amount	D. From Normal	Max. Fall in one day		Number of Days with Amount of Rain						
								Amount	Date	<0.1	≥0.1	≥1.0	≥5.0	≥10	≥25	≥50
Sallum (A)	1.7	2.5	4.5	2.3	2.6	24.4	+ 5.6	12.0	30	1	4	4	2	1	0	0
Mersa Matruh (A)	1.4	3.1	3.9	2.1	2.6	37.5	+ 6.8	21.9	30	4	4	4	2	1	0	0
Alexandria (A)	3.5	5.2	5.5	4.1	4.3	43.9	— 5.2	15.7	29	0	13	7	3	1	0	0
Port Said (A)	1.8	2.9	3.3	2.7	2.8	8.8	— 3.7	4.5	25	0	4	4	0	0	0	0
El Arish	2.9	3.4	4.3	4.5	3.6	9.9	—10.0	7.5	25	0	7	3	1	0	0	0
Ghazza	4.2	4.2	4.2	2.5	3.7	20.0	—59.9	8.2	26	0	6	4	1	0	0	0
Tanta	1.5	3.1	3.4	1.1	2.2	2.9	— 7.3	2.6	24	0	3	1	0	0	0	0
Cairo (A)	1.5	3.3	4.6	1.5	2.7	6.9	+ 1.8	3.0	25	2	3	3	0	0	0	0
Fayoum	—	2.1	3.3	1.4	—	5.2	+ 4.2	4.0	29	0	3	2	0	0	0	0
Minya (A)	0.0	1.5	2.1	0.8	1.2	0.0	— 0.4	0.0	—	0	0	0	0	0	0	0
Assyout (A)	0.0	0.9	1.4	0.6	0.6	0.0	— tr.	0.0	—	0	0	0	0	0	0	0
Luxor (A)	0.6	0.6	0.7	0.7	0.6	0.9	+ 0.8	0.9	2	0	1	0	0	0	0	0
Aswan	0.4	1.4	1.4	0.7	0.9	0.0	— 0.0	0.0	—	0	0	0	0	0	0	0
Siwa	1.4	2.7	3.5	1.9	2.2	0.5	— 0.4	0.3	22	0	2	0	0	0	0	0
Bahariya	0.6	1.6	2.5	0.7	1.3	0.7	+ 0.7	0.7	29	0	1	1	0	0	0	0
Farafra	—	0.5	1.8	0.5	—	0.0	— tr.	0.0	—	0	0	0	0	0	0	0
Dakhla	0.0	0.5	0.6	0.1	0.3	0.0	— tr.	0.0	—	0	0	0	0	0	0	0
Kharga	0.2	0.4	1.1	0.2	0.5	0.0	— 0.1	0.0	—	0	0	0	0	0	0	0
Tor	0.6	1.7	1.9	1.4	1.4	3.8	+ 2.3	3.8	1	0	1	1	0	0	0	0
Hurghada	0.3	0.9	1.6	0.5	0.8	0.0	— tr.	0.0	—	0	0	0	0	0	0	0
Quseir	0.3	0.9	1.6	0.5	0.8	0.0	— tr.	0.0	—	0	0	0	0	0	0	0

Table A 4. — DAYS OF OCCURRENCE OF MISCELLANEOUS WEATHER PHENOMENA.

JANURAY 1966

Station	Precipitation				Frost	Thunderstorm	Mist Vis ≥ 1000 metres	Fog Vis < 1000 Metres	Haze Vis ≥ 1000 Metres	Thick Haze Vis < 1000 Metres	Dust or Sandrising Vis ≥ 1000 Metres	Dust or Sandstorm Vis < 1000 Metres	Gale	Clear Sky	Cloudy Sky
	Rain	Snow	Ice Pellets	Hail											
Sallum (A)	4	0	0	0	0	1	0	0	0	0	6	0	0	11	3
Mersa Matruh (A)	3	0	0	0	0	0	0	0	0	0	1	0	0	14	0
Alexandria (A)	11	0	0	0	0	2	5	0	0	0	1	0	0	2	3
Port Said (A)	3	0	0	0	0	1	2	2	0	0	2	0	0	0	0
Al Arish	7	0	0	0	0	0	3	2	0	0	4	0	0	6	2
Ghazza	7	0	0	0	0	0	1	1	1	0	2	0	0	8	3
Tanta	2	0	0	0	0	0	2	1	0	0	0	0	0	17	0
Cairo (A)	3	0	0	0	0	0	3	0	12	0	8	0	0	7	0
Fayoum	3	0	0	0	0	0	0	0	0	0	0	0	0	—	—
Minya (A)	0	0	0	0	0	0	1	1	0	0	2	0	0	24	0
Assyout (A)	0	0	0	0	0	0	0	0	8	0	3	0	0	30	0
Luxor (A)	0	0	0	0	0	0	0	0	6	0	0	0	0	29	0
Aswan (A)	0	0	0	0	0	0	0	0	4	0	1	1	0	27	0
Siwa	2	0	0	0	0	0	0	0	1	0	3	0	0	14	0
Bahariya	1	0	0	0	0	0	1	0	0	0	3	0	0	22	0
Farafra	0	0	0	0	0	0	0	0	2	0	4	0	0	—	—
Dakhla	0	0	0	0	0	0	0	0	4	0	1	0	0	31	0
Kharga	0	0	0	0	0	0	0	0	3	0	2	0	0	30	0
Tor	2	0	0	0	0	0	0	0	0	0	0	0	0	24	0
Hurghada	0	0	0	0	0	0	0	0	0	0	0	0	0	27	0
Quseir	0	0	0	0	0	0	0	0	0	0	0	0	0	27	0

**Table A 5.—NUMBER IN HOURS OF OCCURRENCES OF CONCURRENT SURFACE
WIND SPEED AND DIRECTION RECORDED WITHIN SPECIFIED RANGES
JANUARY — 1966**

Station	calm (hours)	Variable (hours)	Unrecorded (hours)	Wind speed in knots	Number in hours of occurrences of wind blowing from the ranges of directions indicated														All directions
					345	015	045	075	105	135	165	195	225	255	285	315			
					/014	/044	/074	/104	/134	/164	/194	/224	/254	/284	/314	/344			
Sallum	2	0	0	1-10	11	2	1	4	1	4	4	15	22	49	25	9	147		
				11-27	3	0	0	0	0	0	3	80	185	251	66	6	594		
				28-47	0	0	0	0	0	0	0	1	0	0	0	0	1		
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0		
				All speeds	14	2	1	4	1	4	7	96	207	300	91	15	742		
Mersa Matruh . (A)	0	1	0	1-10	5	12	2	0	1	8	23	21	164	36	30	15	317		
				11-27	5	8	0	0	0	1	16	76	36	209	30	37	418		
				28-47	0	0	0	0	0	0	0	8	0	0	0	0	8		
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0		
				All speeds	10	20	2	0	1	9	39	105	200	245	60	62	743		
Alexandria . . . (A)	53	0	0	1-10	6	11	3	16	32	41	91	119	39	34	26	18	436		
				11-27	0	0	0	0	0	4	7	99	100	31	7	7	255		
				28-47	0	0	0	0	0	0	0	0	0	0	0	0	0		
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0		
				All speeds	6	11	3	16	32	45	98	218	139	65	33	25	691		
Port Said . . . (A)	5	6	0	1-10	26	22	24	24	27	43	60	52	56	45	33	25	437		
				11-27	2	0	0	0	0	10	34	99	117	18	10	6	296		
				28-47	0	0	0	0	0	0	0	0	0	0	0	0	0		
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0		
				All speeds	28	22	24	24	27	53	94	151	173	63	43	31	733		
Tanta	68	7		1-10	11	18	11	23	30	36	65	155	145	75	28	23	620		
				11-27	0	0	0	0	0	0	0	5	14	29	0	1	49		
				28-47	0	0	0	0	0	0	0	0	0	0	0	0	0		
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0		
				All speeds	11	18	11	23	30	36	65	160	159	104	28	24	669		
Said (A)	21	0	115	1-10	19	27	28	33	35	36	63	43	32	19	12	31	378		
				11-27	0	0	2	4	6	21	93	74	14	13	2	1	230		
				28-47	0	0	0	0	0	0	0	0	0	0	0	0	0		
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0		
				All speeds	19	27	30	37	41	57	156	117	46	32	14	32	608		
Said	22	4	33	1-10	76	18	3	8	5	37	228	95	75	40	37	63	685		
				11-27	0	0	0	0	0	0	0	0	0	0	0	0	0		
				28-47	0	0	0	0	0	0	0	0	0	0	0	0	0		
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0		
				All speeds	76	18	3	8	5	37	228	95	75	40	37	63	685		
Said (A)	37	186	0	1-10	51	2	0	0	16	123	43	15	31	30	42	84	437		
				11-27	19	0	1	0	0	8	6	3	11	13	13	10	84		
				28-47	0	0	0	0	0	0	0	0	0	0	0	0	0		
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0		
				All speeds	70	2	1	0	16	131	49	18	42	43	55	94	521		

**Table A 5 (contd)—NUMBER IN HOURS OF OCCURRENCE OF CONCURRENT SURFACE
WIND SPEED AND DIRECTION RECORDED WITHIN SPECIFIED RANGES**

JANUARY — 1966

Station	calm (hours)	Variable (hours)	Unrecorded (hours)	Wind speed in knots	Number in hours of occurrences of wind blowing from the ranges of directions indicated													All directions
					345	015	045	075	105	135	165	195	225	255	285	315		
					/014	/044	/074	/104	/134	/164	/194	/224	/254	/284	/314	/344		
Asyout (A)	36	0	7	1-10	2	7	25	22	34	42	26	23	135	183	106	13	618	
				11-27	2	0	0	1	1	7	1	4	12	17	22	16	83	
				28-47	0	0	0	0	0	0	0	0	0	0	0	0	0	
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0	
				All speeds	4	7	25	23	35	49	27	27	147	200	128	29	701	
Luxor (A)	43	4	4	1-10	19	51	40	42	46	56	74	55	54	52	104	93	686	
				11-27	0	0	0	0	0	0	0	0	3	1	2	1	7	
				28-47	0	0	0	0	0	0	0	0	0	0	0	0	0	
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0	
				All speeds	19	51	40	42	46	56	74	55	57	53	106	94	693	
Aswan (A)	4	4	5	1-10	252	292	8	3	1	1	0	0	6	12	22	77	674	
				11-27	32	16	0	0	0	0	0	0	0	0	0	9	57	
				28-47	0	0	0	0	0	0	0	0	0	0	0	0	0	
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0	
				All speeds	284	308	8	3	1	1	0	0	6	12	22	86	731	
Siwa	106	6	0	1-10	1	0	2	8	49	35	34	30	64	153	97	9	482	
				11-27	1	0	0	0	0	1	2	8	17	57	54	9	149	
				28-47	0	0	0	0	0	0	0	0	0	0	0	1	1	
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0	
				All speeds	2	0	2	8	49	36	36	38	81	210	151	19	632	
Dakhla	23	6	0	1-10	18	14	42	43	19	34	37	43	77	97	210	80	714	
				11-27	0	0	0	0	0	0	0	0	0	0	1	0	1	
				28-47	0	0	0	0	0	0	0	0	0	0	0	0	0	
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0	
				All speeds	18	14	42	43	19	34	37	43	77	97	211	80	715	
Hurghada	8	3	0	1-10	11	18	20	9	11	6	5	17	16	31	138	20	302	
				11-27	50	8	1	0	10	13	4	0	0	30	181	124	421	
				28-47	0	0	0	0	0	0	0	0	0	0	5	5	10	
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0	
				All speeds	61	26	21	9	21	19	9	17	16	61	324	149	733	
Quseir	0	8	3	1-10	42	68	5	7	14	10	17	13	25	217	122	30	570	
				11-27	43	11	0	0	3	3	0	0	2	40	23	38	163	
				28-47	0	0	0	0	0	0	0	0	0	0	0	0	0	
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0	
				All speeds	85	79	5	7	17	13	17	13	27	257	145	68	733	

Table B 1.—UPPER AIR CLIMATOLOGICAL DATA
JANUARY—1966

Station	Pressure Surface (Millibar)	Altitude of Pressure Surface (gpm)				Temperature (°C)				Dew Point (°C)	
		N	Mean	Highest	Lowest	N	Mean	Highest	Lowest	N	Mean
Mersa Matruh 0000 U.T.	Surface . . .	31	* 1016m.b.	* 1024m.b.	* 1009m.b.	31	10.9	16.6	6.2	31	4.6
	1000 . . .	31	161	229	103	31	13.5	21.7	8.3	31	5.3
	850 . . .	31	1512	1559	1447	31	5.0	12.1	-3.0	28	-4.2
	700 . . .	31	3073	3141	2988	31	-3.1	2.7	-8.3	20	-12.0
	600 . . .	31	4278	4367	4168	31	-10.2	-5.5	-17.0	16	-19.1
	500 . . .	31	5659	5765	5512	31	-19.5	-12.0	-27.5	12	-24.4
	400 . . .	31	7279	7408	7079	31	-31.6	-24.0	-40.0	12	-34.6
	300 . . .	30	9250	9443	9015	30	-45.9	-39.7	-49.1	—	—
	200 . . .	27	11870	12103	11687	27	-57.0	-50.0	-66.3	—	—
	150 . . .	19	13690	13932	13550	18	-59.0	-51.8	-63.9	—	—
	100 . . .	11	16216	16284	16106	11	-65.0	-60.0	-71.7	—	—
	70 . . .	6	18405	18480	18330	6	-64.8	-63.2	-66.4	—	—
	60 . . .	5	19344	19402	19273	5	-65.2	-63.3	-67.4	—	—
	50 . . .	3	20478	20525	20430	3	-61.8	-58.6	-65.1	—	—
	40 . . .	1	21900	—	—	1	-54.1	—	—	—	—
	30 . . .	1	23752	—	—	1	-52.4	—	—	—	—
	20 . . .	—	—	—	—	—	—	—	—	—	—
	10 . . .	—	—	—	—	—	—	—	—	—	—
Helwan 0000 U.T.	Surface . . .	31	* 1001m.b.	* 1006m.b.	* 994m.b.	31	11.1	18.4	6.2	31	1.9
	1000 . . .	31	145	189	92	19	10.0	14.7	6.7	19	1.8
	850 . . .	31	1494	1541	1431	31	5.9	12.8	-1.2	22	-4.5
	700 . . .	31	3063	3165	2958	31	-1.6	2.7	-9.6	13	-15.8
	600 . . .	31	4276	4378	4134	31	-8.0	-1.0	-15.0	10	-16.4
	500 . . .	31	5668	5773	5482	31	-17.4	-10.7	-26.6	10	-24.6
	400 . . .	31	7301	7426	7059	31	-29.8	-25.4	-37.0	12	-34.5
	300 . . .	31	9288	9457	9011	31	-44.7	-39.4	-48.3	—	—
	200 . . .	31	11910	12094	11688	31	-57.4	-48.5	-67.2	—	—
	150 . . .	31	13721	13899	13537	31	-59.6	-54.7	-65.2	—	—
	100 . . .	31	16222	16384	16017	21	-66.0	-60.9	-71.2	—	—
	70 . . .	31	18386	18530	18150	31	-64.9	-57.0	-75.9	—	—
	60 . . .	26	19330	19472	19105	26	-62.4	-57.1	-70.6	—	—
	25 . . .	25	20462	20630	20225	25	-61.2	-54.8	-68.1	—	—
	40 . . .	23	21859	22056	21610	23	-59.6	-55.1	-63.5	—	—
	30 . . .	19	23659	23853	23405	19	-56.8	-51.2	-62.7	—	—
	20 . . .	11	26246	26485	26061	11	-52.9	-48.1	-59.9	—	—
	10 . . .	1	30962	—	—	1	-41.2	—	—	—	—
Aswan 0000 U.T.	Surface . . .	27	* 994m.b.	* 997m.b.	* 990m.b.	27	12.1	19.3	7.2	27	-0.6
	1000 . . .	27	138	168	101	—	—	—	—	—	—
	850 . . .	27	1511	1534	1479	27	11.6	17.7	5.6	22	-5.0
	700 . . .	27	3114	3166	3055	27	4.6	8.6	0.7	2	-4.2
	600 . . .	26	4353	4417	4295	26	-2.7	1.9	-6.0	1	-8.2
	500 . . .	26	5774	5862	5715	26	-12.2	-7.1	-16.2	2	-25.0
	400 . . .	25	7442	7564	7375	25	-24.9	-19.7	-29.5	2	-29.3
	300 . . .	22	9474	9636	9390	22	-40.1	-35.4	-48.2	—	—
	200 . . .	15	12149	12261	12039	15	-55.6	-51.0	-62.8	—	—
	150 . . .	14	13947	14070	13803	14	-62.7	-59.5	-67.7	—	—
	100 . . .	11	16398	16557	16222	11	-71.7	-69.0	-78.2	—	—
	70 . . .	3	18477	18500	18340	3	-69.8	-65.4	-73.9	—	—
	60 . . .	3	19369	19440	19250	2	-65.2	-62.2	-68.1	—	—
	50 . . .	3	20485	20572	20357	3	-65.0	-62.7	-67.0	—	—
	40 . . .	3	21852	21948	21721	3	-63.4	-61.8	-65.5	—	—
	30 . . .	3	23641	23744	23595	3	-58.0	-56.5	-59.1	—	—
	20 . . .	2	26313	26353	26273	2	-52.6	-51.1	-54.0	—	—
	10 . . .	—	—	—	—	—	—	—	—	—	—

N = The number of cases the element has been observed during the month.

* The atmospheric pressure corrected to the elevation of the radiosonde station.

Table B 1 (contd.).—UPPER AIR CLIMATOLOGICAL DATA
JANUARY—1966

Station	Pressure Surface Millibar	Altitude of Pressure Surface (gpm)				Temperature (°C)				Dew Point (°C)	
		N	Mean	Highest	Lowest	N	Mean	Highest	Lowest	N	Mean
Mersa Matruh 1200 U.T.	Surface . . .	31	* 1015m.b.	* 1022m.b.	* 1007m.b.	31	18.3	24.4	12.5	31	7.4
	1000 . . .	31	160	205	88	31	16.4	23.3	10.7	31	5.7
	850 . . .	31	1513	1568	1431	31	5.2	11.9	-2.7	28	-2.6
	700 . . .	31	3073	3161	2962	31	-2.6	2.1	-11.0	16	-13.1
	600 . . .	31	4291	4388	4140	31	-9.9	-3.4	-19.3	13	-19.1
	500 . . .	31	5667	5791	5478	31	-19.1	-13.5	-28.8	11	-25.1
	400 . . .	31	7290	7439	7049	31	-30.9	-24.3	-38.7	9	-33.3
	300 . . .	29	9283	9441	9026	29	-44.7	-39.2	-49.7	—	—
	200 . . .	27	11910	12126	11697	27	-56.9	-44.1	-64.0	—	—
	150 . . .	24	13634	13921	13540	24	-58.0	-47.5	-66.8	—	—
	100 . . .	15	16259	16470	16183	15	-64.1	-59.3	-68.0	—	—
	70 . . .	6	18450	18650	18370	6	-60.8	-57.6	-63.7	—	—
	60 . . .	6	19414	19629	19308	6	-61.2	-58.0	-62.6	—	—
	50 . . .	6	20554	20782	20441	6	-59.5	-56.8	-61.3	—	—
	40 . . .	4	22002	22217	21906	4	-55.8	-50.3	-59.8	—	—
	30 . . .	1	23788	—	—	1	-50.6	—	—	—	—
	20 . . .	1	26489	—	—	1	-43.0	—	—	—	—
	10 . . .	—	—	—	—	—	—	—	—	—	—
Helwan 1200 U.T.	Surface . . .	31	* 1000m.b.	* 1004m.b.	* 993m.b.	31	18.4	24.6	12.8	31	3.2
	1000 . . .	31	135	174	84	13	16.8	21.7	13.7	13	1.7
	850 . . .	31	1465	1546	1436	31	6.9	15.0	0.4	22	-2.7
	700 . . .	31	3069	3141	2974	31	-0.6	4.6	-8.5	17	-12.5
	600 . . .	31	4285	4372	4156	31	-7.5	-3.2	-14.4	9	-18.5
	500 . . .	31	5680	5783	5532	31	-16.9	-12.5	-23.6	10	-25.1
	400 . . .	31	7319	7447	7142	31	-27.2	-22.4	-34.3	9	-34.3
	300 . . .	31	9315	9437	9107	31	-43.5	-38.2	-50.5	—	—
	200 . . .	29	11958	12119	11772	29	-56.8	-46.7	-63.0	—	—
	150 . . .	28	13782	13943	13593	28	-58.8	-51.8	-64.1	—	—
	100 . . .	26	16291	16440	16140	26	-64.9	-57.3	-71.0	—	—
	70 . . .	23	18470	18610	18280	23	-63.2	-58.5	-71.4	—	—
	60 . . .	19	19429	19568	19327	19	-61.4	-56.6	-68.3	—	—
	50 . . .	15	20576	20713	20467	15	-60.0	-57.0	-64.6	—	—
	40 . . .	13	21992	22127	21894	13	-56.2	-52.4	-61.0	—	—
	30 . . .	11	23822	23971	23717	11	-54.5	-51.1	-62.0	—	—
	20 . . .	6	26437	26623	26289	6	-50.1	-44.8	-53.5	—	—
	10 . . .	1	30953	—	—	1	-42.2	—	—	—	—
Aswan 1200 U.T.	Surface . . .	29	* 993m.b.	* 997m.b.	* 989m.b.	29	23.0	32.0	17.0	29	2.7
	1000 . . .	29	133	168	94	—	—	—	—	—	—
	850 . . .	28	1519	1553	1478	28	13.0	19.6	6.2	18	-4.7
	700 . . .	29	3129	3159	3080	29	6.2	9.1	3.1	1	-9.0
	600 . . .	29	4375	4432	4319	29	-1.3	2.3	-5.6	—	—
	500 . . .	29	5804	5870	5736	29	-10.9	-5.0	-15.3	2	-24.3
	400 . . .	28	7483	7582	7402	28	-23.3	-17.3	-28.4	—	—
	300 . . .	26	9532	9684	9404	26	-37.3	-32.7	-44.6	—	—
	200 . . .	24	12226	12400	12046	24	-54.9	-49.8	-63.2	—	—
	150 . . .	18	14039	14215	13847	18	-62.0	-56.2	-72.0	—	—
	100 . . .	13	16505	16669	16324	13	-69.9	-65.4	-72.3	—	—
	70 . . .	4	18651	18720	18520	4	-63.1	-60.8	-64.8	—	—
	60 . . .	3	19600	19669	19480	3	-60.7	-60.3	-61.2	—	—
	50 . . .	3	20738	20804	20617	3	-59.4	-58.4	-60.0	—	—
	40 . . .	3	22149	22214	22029	3	-55.3	-54.6	-56.4	—	—
	30 . . .	2	23970	24015	23894	2	-50.8	-48.8	-52.8	—	—
	20 . . .	2	26646	26701	26592	2	-42.7	-40.7	-44.8	—	—
	10 . . .	—	—	—	—	—	—	—	—	—	—

N = The number of cases the element has been observed during the month.

* The atmospheric pressure corrected to the elevation of the radiosonde station.

**Table B 2.—MEAN AND EXTREME VALUES OF THE FREEZING LEVEL AND THE TROPOPAUSE.
THE HIGHEST WIND SPEED IN THE UPPER AIR
JANUARY—1966**

Station	Freezing level									First Tropopause									Highest wind speed							
	Mean			Highest			Lowest			Mean			Highest			Lowest			Altitude (gpm)	Pressure (mb.)	Direction (000-360)°	Speed in Knots				
	Altitude (gpm)	Pressure (mb.)	Dew point (°C)	Altitude (gpm)	Pressure (mb.)	Dew point (°C)	Altitude (gpm)	Pressure (mb.)	Dew point (°C)	Altitude (gpm)	Pressure (mb.)	Temperature (°C)	Altitude (gpm)	Pressure (mb.)	Temperature (°C)	Altitude (gpm)	Pressure (mb.)	Temperature (°C)								
0000 U.T.	Mersa Matruh (A)	2387 (31)	765 (31)	-7.5 (26)	3430	670	-13.0	1300	876	-3.6	(N)	(N)	(N)	10570 (25)	236 (25)	-57.4 (25)	12380	183	-65.2	7250	392	-41.1	11325	223	294	120
	Helwan	2555 (31)	748 (31)	-7.1 (19)	3660	650	—	1520	840	-4.9	11833 (31)	206 (31)	-59.3 (31)	17728	80	-70.9	9450	292	-46.4	15490	113	290	142			
	Aswan . . . (A)	3940 (26)	632 (26)	-11.4 (2)	4680	581	—	3300	683	0.0	14953 (6)	126 (6)	-68.9 (6)	16366	100	-73.1	13923	150	-67.7	12100	201	250	160			
1200 U.T.		(N)	(N)	(N)							(N)	(N)	(N)													
	Mersa Matruh (A)	2533 (31)	728 (31)	-5.7 (20)	4120	616	-7.0	1110	888	-2.8	11292 (25)	222 (25)	-58.0 (25)	12240	188	-65.0	9730	282	-48.0	10300	258	276	186			
	Helwan	2714 (31)	735 (31)	-6.0 (18)	3820	636	—	1600	839	-3.3	12193 (28)	206 (28)	-58.8 (28)	17070	90	-73.0	9150	307	-43.9	10335	255	280	148			
	Aswan . . . (A)	4185 (29)	615 (29)	-17.2 (1)	4800	577	—	3570	661	—	15131 (9)	129 (9)	-66.4 (9)	16800	95	-71.3	12570	184	-59.6	11450	—	250	150			

Table B 3.—NUMBER OF OCCURRENCES OF WIND DIRECTION WITHIN SPECIFIED RANGES AND THE MEAN SCALAR WIND SPEED AT THE STANDARD AND SELECTED PRESSURE SURFACES.

MERSA MATRUH (A)—JANUARY 1966

Time	Pressure Surface (Millibar)	Wind between ranges of direction (000—360)°																								Number of Calm winds	Total Number of Observations (T N)	Mean Scalar wind Speed (Knots)	
		345		015		045		075		105		135		165		195		225		255		285		315					
		/		/		/		/		/		/		/		/		/		/		/		/					
		N	(ff)	N	(ff)	N	(ff)	N	(ff)	N	(ff)	N	(ff)	N	(ff)	N	(ff)	N	(ff)	N	(ff)	N	(ff)	N	(ff)				
		014	m	044	m	074	m	104	m	134	m	164	m	194	m	224	m	254	m	284	m	314	m	344	m				
0000 U.T.	Surface	0	—	0	—	0	—	0	—	0	—	0	—	1	10	5	18	13	12	13	0	—	0	—	0	—	0	31	13
	1000	0	—	0	—	0	—	0	—	0	—	0	—	1	18	5	23	9	25	6	33	5	18	0	—	0	23	25	
	850	0	—	0	—	0	—	0	—	0	—	0	—	1	16	1	30	9	23	11	24	1	30	0	—	0	23	24	
	700	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	34	4	32	6	28	1	51	0	—	0	13	32	
	600	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	43	2	42	9	40	0	—	0	—	0	13	41	
	500	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	3	40	8	47	2	64	0	—	0	13	48	
	400	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	3	70	7	49	3	48	0	—	0	13	54	
	300	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	5	62	2	84	2	74	0	—	0	9	69	
	200	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	61	3	71	0	—	0	—	0	5	67	
	150	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	64	1	64	0	—	0	—	0	3	64	
	100	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	22	1	40	0	—	0	—	0	2	31	
	70	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	37	0	—	0	—	0	1	37	
	60	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	30	0	—	0	—	0	1	30	
	50	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	34	0	—	0	—	0	1	34	
40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
1200 U.T.	Surface	1	12	1	9	0	—	0	—	0	—	0	—	2	19	3	13	3	22	9	20	7	18	5	15	0	31	18	
	1000	0	—	0	—	0	—	0	—	1	9	0	—	3	18	3	22	8	21	5	26	10	23	1	5	0	31	21	
	850	2	11	0	—	0	—	0	—	0	—	1	14	0	—	4	17	8	22	11	27	5	24	0	—	0	31	23	
	700	1	16	0	—	0	—	0	—	0	—	0	—	0	—	1	16	8	33	15	35	4	36	0	—	0	29	34	
	600	1	15	0	—	0	—	0	—	0	—	0	—	0	—	1	51	6	50	16	36	3	47	0	—	0	27	40	
	500	1	19	0	—	0	—	0	—	0	—	0	—	0	—	0	—	9	47	10	48	6	49	0	—	0	26	47	
	400	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	3	62	15	61	5	82	1	10	0	24	64	
	300	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	3	85	9	86	5	46	0	—	0	17	74	
	200	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	77	6	74	2	52	0	—	0	9	69	
	150	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	56	4	86	2	44	0	—	0	7	69	
	100	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	82	1	24	0	—	0	3	62	
	70	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	28	0	—	0	—	0	2	28	
	60	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	31	1	10	0	—	0	2	20	
	50	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	34	1	27	0	—	0	2	30	
40	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	30	0	—	0	—	0	1	30		
30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	

N = The number of cases the element has been observed during the month,

TN = The total number of cases the wind has been observed for all directions during the month,

**Table B 3.(contd.)—NUMBER OF OCCURRENCES OF WIND DIRECTION WITHIN SPECIFIED RANGES AND THE MEAN SCALAR WIND SPEED AT THE STANDARD AND SELECTED PRESSURE SURFACES.
HELWAN—JANUARY 1966**

Time	Pressure Surface (Millibar)	Wind between ranges of direction (000—360)°																Number of Calm winds	Total Number of Observations (T N)	Mean Scalar wind Speed (Knots)								
		345 / 014		015 / 044		045 / 074		075 / 104		105 / 134		135 / 164		165 / 194		195 / 224					225 / 254		255 / 284		285 / 314		315 / 344	
		(ff)		(ff)		(ff)		(ff)		(ff)		(ff)		(ff)		(ff)					(ff)		(ff)		(ff)		(ff)	
		N	m	N	m	N	m	N	m	N	m	N	m	N	m	N	m				N	m	N	m	N	m	N	m
0000 U.T.	Surface	1	3	1	7	4	6	1	7	7	8	4	8	2	8	1	3	0	—	1	21	0	—	1	6	8	31	6
	1000	3	10	3	15	2	14	1	7	2	12	1	6	1	6	1	3	2	15	1	21	0	—	0	—	2	19	11
	860	1	15	2	6	1	14	0	—	0	—	0	—	0	—	2	28	10	19	7	21	6	15	2	10	31	18	
	700	1	14	0	—	0	—	0	—	0	—	0	—	0	—	3	33	9	29	12	22	3	20	2	22	0	30	25
	600	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	58	11	38	12	32	4	43	0	—	0	29	37
	500	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	68	9	52	15	41	1	35	0	—	0	27	46
	500	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	52	3	45	15	61	2	42	0	—	0	21	57
	300	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	72	13	68	2	49	0	—	0	16	67
	200	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	80	6	72	3	88	0	—	0	10	78
	150	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	136	6	85	2	104	0	—	0	9	95
	100	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	74	0	—	0	—	0	2	74
	70	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	85	0	—	0	—	0	1	85
	60	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	88	0	—	0	—	0	1	88
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
1200 U.T.	Surface	1	4	3	10	2	8	0	—	1	3	1	4	4	9	8	10	6	9	2	8	1	10	1	12	1	31	8
	1000	1	5	2	16	2	16	0	—	0	—	0	—	1	4	3	9	3	11	0	—	0	—	1	12	0	13	11
	850	2	9	1	14	1	10	1	2	0	—	0	—	1	4	2	16	12	17	9	17	2	13	0	—	0	31	15
	700	1	12	0	—	0	—	0	—	0	—	0	—	0	—	2	28	8	25	16	28	2	12	1	21	0	30	25
	600	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	53	10	49	14	29	3	22	2	24	0	30	33
	500	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	76	5	57	18	41	5	32	0	—	0	29	43
	400	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	5	53	13	49	5	55	1	14	0	24	49
	300	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	4	68	12	71	3	51	1	35	0	20	65
	200	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	72	7	68	1	42	0	—	0	10	66
	150	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	71	5	94	1	62	0	—	0	7	86
	100	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	5	49	0	—	0	—	0	5	49
	70	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	31	0	—	0	—	0	2	31
	60	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	30	0	—	0	—	0	2	30
	50	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	23	0	—	0	—	0	—	0	1	23
	40	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	20	0	—	0	—	0	1	20
30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	

N = The number of cases the element has been observed during the month,

TN = The total number of cases the wind has been observed for all directions during the month,

**Table B 3.(contd)—NUMBER OF OCCURRENCES OF WIND DIRECTION WITHIN SPECIFIED RANGES AND
THE MEAN SCALAR WIND SPEED AT THE STANDARD AND SCLECTED PRESSURE SURFACES.
ASWAN (A)—JANUARY 1966**

ASWAN (A) - JANUARY 1966

Time	Pressure Surface (Millibar)	Wind between ranges of direction (000-360)°																								Number of Calm winds	Total Number of Observations (T N)	Mean Scalar wind Speed (Knots)	
		345 / 014		015 / 044		045 / 074		075 / 104		105 / 134		135 / 164		165 / 194		195 / 224		225 / 254		255 / 284		285 / 314		315 / 344					
		N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m				
0000 U.T.	Surface	15	10	6	7	0	—	0	—	1	8	0	—	0	—	0	—	1	5	0	—	0	—	2	6	2	27	8	
	1000	2	7	0	—	1	6	2	8	0	—	3	9	0	—	2	10	2	10	2	10	8	12	5	6	0	—	—	
	850	0	—	0	—	0	—	0	—	0	—	0	—	2	12	3	18	4	26	14	20	3	16	1	6	0	27	9	
	700	0	—	0	—	0	—	0	—	0	—	0	—	1	33	2	28	8	31	10	29	4	20	0	—	0	27	19	
	600	1	10	0	—	0	—	0	—	0	—	0	—	1	37	0	—	2	31	5	40	13	41	3	36	1	25	26	28
	500	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	25	1	46	7	38	10	44	3	43	0	0	25	39
	400	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	7	38	10	44	3	43	0	—	0	22	41	
	300	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	7	61	10	72	3	48	0	—	0	20	64	
	200	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	8	98	6	76	0	—	0	—	0	14	80	
	100	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	6	62	3	67	1	57	0	—	0	10	63	
	100	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	30	2	52	2	38	2	59	0	—	0	7	47	
	70	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	34	1	25	0	—	0	2	30	
	60	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	34	1	25	0	—	0	1	10	
	50	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	10	0	—	0	—	0	—	0	—	0	1	14	
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
1200 U.T.	Surface	17	8	1	5	1	3	0	—	0	—	0	—	0	—	0	—	1	6	0	—	3	6	6	6	29	6		
	1000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	850	3	17	2	6	2	5	0	—	1	4	0	—	0	—	4	5	5	12	5	12	7	9	2	6	0	28	8	
	700	0	—	0	—	0	—	0	—	0	—	0	—	1	30	4	20	9	24	7	14	7	12	1	36	0	29	19	
	600	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	39	12	31	13	26	2	19	0	—	0	28	28	
	500	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	14	41	12	35	1	47	0	—	0	28	39	
	400	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	14	48	12	54	1	46	0	—	0	27	51	
	300	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	9	64	16	70	0	—	0	—	0	25	68	
	200	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	11	86	9	98	3	75	0	—	0	23	90	
	150	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	4	75	8	66	0	—	0	—	0	12	69	
	100	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	25	3	38	1	40	0	—	0	5	36	
	70	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	26	0	—	0	1	26	
	60	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	28	0	—	0	—	0	1	28	
	50	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	28	0	—	0	—	0	1	28	
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		

N = The number of cases the element has been observed during the month.
 TN = The total number of cases the wind has been observed for all directions during the month.

REVIEW OF AGRO-METEOROLOGICAL STATION AT EL KASR

JANUARY 1966

This month was slightly warmer and drier than normal. The daily mean air temperature at 2 metres above ground was 0.6°C above normal and the total amount of rainfall was 0.6 mm below normal. The month was distinguished by two heat waves, the first between the 14th and 16th and the second between the 19th and 22nd. The second one was the more intense and yielded the peak on the 21st when the extreme maximum air temperature for the month was recorded.

The extreme maximum soil temperatures at depths between 0.3 and 50 cms inclusive were higher than the corresponding values for January 1965, the maximum difference was 6.8°C at 0.3 cm depth. At 100 cms depth the value was equal to the corresponding value of last January. The extreme minimum soil temperatures at depths 0.3, 1 and 2 cm were lower than the corresponding values for January 1965 by 1.5, 1.0 and 0.6°C respectively. At 5 cms depth the value was the same as that of last January. At depths between 10 and 100 cms inclusive the values were higher than the corresponding values of January 1965, the maximum difference was 0.7°C at 50 and 100 cms depths.

The mean daily wind speed at 2 metres height was 0.4m/sec higher than the corresponding value of January 1965. The total actual duration of bright sunshine was 35.6 hours higher than the corresponding value of last January. Mean daily Piche evaporation and water Pan evaporation were higher than the corresponding values of January 1965 by 6.3 and 1.98 mms. respectively.

REVIEW OF AGRO-METEOROLOGICAL STATION AT TAHRIR

JANUARY 1966

Compared with January 1965, this month was slightly warm and dry as regards air temperature and relative humidity. Mean daily air temperature at 2 metres above ground was 0.5°C higher, while mean daily relative humidity was 14% lower than the corresponding values for 1965. Total amount of rainfall was 32.7 mm lower than the corresponding value of last January.

The month started with a cold wave which prevailed in the first two weeks. This was followed by a warm spell on 15th and 16th and a more intense heat wave between the 21st and 24th with peak on the 22nd when the extreme maximum air temperature and the lowest relative humidity for the month occurred.

The extreme maximum soil temperatures in the field at depths between 0.3 and 20cms inclusive were higher than the corresponding values of January 1965; the maximum difference was 0.6°C at 1 cm depth. At 50 and 100 cms depths the values were lower than the corresponding values of last January by 0.4 and 1.2°C respectively. The extreme minimum soil temperatures at depths between 0.3 and 5 cms inclusive were lower than the

corresponding values of January 1965; the maximum difference was -3.0°C at 0.3 cm depth. At 10, 20 and 50 cms depths the values were higher than the corresponding values of January 1965 by 0.2, 0.7 and 0.7°C respectively while at 100 cms depth the value was equal to that of last January.

The mean daily wind speed at 2 metres height was 0.2 m/sec lower than the corresponding value of January 1965. Mean values of Piche evaporation and Class A Pan evaporation were higher than the corresponding values of January 1965 by 2.9 and 1.54 mms respectively. Total actual duration of bright sunshine was 12.1 hours higher than the corresponding value of January 1965.

REVIEW OF AGRO-METEOROLOGICAL STATION AT GIZA JANUARY 1966

This month was slightly warm and dry as compared with the normal values of air temperature and relative humidity for Giza during January. The daily mean air temperature at 2 metres above ground was slightly above normal (+ 0.3). The daily mean relative humidity was below normal (-9%). Total rainfall was below normal.

The month was characterised by a prolonged cold wave which prevailed in the first two weeks of the month yielding a peak on the 8th. This was followed by two warm waves through the periods 15th—17th and 20th—24th with their peaks on the 16th and 22nd respectively. The latter peak gave the extreme maximum temperature for the month.

The minimum air temperature at 5cms. above grass (Libia) fell below 0°C on 12 days against 5 days during last January. The duration of air temperature below 0°C on these days together with the actual values of minimum air temperatures are given in the following table.

Air Temperature Below 0°C at 5 cms Above Grass (LIBIA)

Date	Min. air temp.	Duration in hours (to the nearest half) of air temp. below the following limits				
		0°C	-1°C	-2°C	-3°C	-4°C
8	-3.3	1.5	1.5	1	0.5	0.0
9	-0.7	1.5	0.0	—	—	—
10	-2.0	2.0	1.0	0.0	—	—
11	-1.6	2.5	1.0	0.0	—	—
12	-1.5	2.5	1.0	0.0	—	—
13	-2.7	2.0	1.5	1.0	0.0	—
14	-2.6	3.5	3.0	2.5	0.0	—
15	-2.5	5.0	3.5	1.5	0.0	—
16	-3.1	3.0	1.5	0.5	0.0	—
18	-0.3	0.0	—	—	—	—
20	-1.6	1.0	1.0	0.0	—	—
27	-0.3	0.5	0.0	—	—	—

The extreme maximum soil temperature in the dry field at depths between 0.3 and 10 cms inclusive were higher than the corresponding values of January 1965; the maximum difference was 3.7°C at 1cm depth. At 20 and 50 cms depths the values were both lower than the corresponding values of January, 1965 by 0.6°C . At 100 cms depth the value was equal to that of last January. The extreme minimum soil temperatures at depths between 0.3 and 10 cms inclusive were lower than the corresponding values of January 1965, the maximum deviation was -1.8°C at 2cms depth. At 20, 50 and 100 cms depths the values were higher than the corresponding values of last January by 0.2, 0.3 and 0.4°C respectively.

The mean daily wind speed at 2ms. height was the same as that of January 1965. Mean daily values of Piche evaporation and Class A Pan evaporation were higher by 2.0 and 0.82 mm respectively, while mean daily potential evapotranspiration was 0.8 mm lower than the corresponding values of January 1965. Total actual duration of bright sunshine was 25.2 hours higher than the corresponding value of January 1965.

REVIEW OF AGRO - METEOROLOGICAL STATION AT KHARGA

JANUARY 1966

This month was slightly warm and dry as compared with the normal values of air temperature and total rainfall for Kharga during January. The daily mean air temperature at 2 metres above ground was 0.6°C above normal and the total amount of rainfall was nil *i.e.* 0.1 mm below normal. The month was distinguished by a cold wave between the 8th and 14th and a heat waves during the period 20th to 25th. The heat wave had the peak on the 22nd when the extreme maximum temperature for the month was recorded.

The extreme maximum soil temperatures at 0.3 cm depth was 2.5°C higher than the corresponding value for January 1965. At other depths between 1 and 100 cms the values were lower than the corresponding values of last year; the differences varied between -0.3°C at 10 cms depth and -2.4°C at 1cm depth. The extreme minimum soil temperature at 1 cm depth was 0.3°C higher than the corresponding value of January 1965. The value at 2cms depth was equal of that of last January. The extreme minimum soil temperatures at 0.3 cm depth and at depths between 5 and 100cms inclusive were lower than the corresponding values of January 1965; the differences varied between -0.2°C at 5 cms depth and -1.0°C at 20 cms depth.

The mean daily wind speed at 2 metres height was 0.4 m/sec lower than the corresponding value of January 1965. Mean daily evaporation was 3.0 mm higher than the corresponding value of last January while mean mean daily class A Pan evaporation was 0.28 mm lower than the corresponding value of January 1965. Total actual duration of bright sunshine was 18.4 hours higher than the corresponding value of January 1965.

**Table C1.— AIR TEMPERATURE AT 2 METRES ABOVE GROUND
JANUARY—1966**

STATION	Air Temperature (°C)					Mean Duration in hours of daily air temperature above the following values										
	Mean Max.	Mean Min.	Mean of the day	Night time mean	Day time mean	—5°C	0°C	5°C	10°C	15°C	20°C	25°C	30°C	35°C	40°C	45°C
El Kasr	19.5	8.4	13.4	11.7	15.7	24.0	24.0	24.0	18.5	8.3	1.5	0.0	0.0	0.0	0.0	0.0
Tahrir	21.1	7.5	13.4	11.2	16.4	24.0	24.0	22.7	16.0	7.8	1.7	0.1	0.0	0.0	0.0	0.0
Giza	20.1	6.5	12.9	11.0	15.3	24.0	24.0	23.1	16.8	7.9	1.4	0.0	0.0	0.0	0.0	0.0
Kharga	22.9	5.0	13.9	10.9	17.7	24.0	24.0	22.6	16.2	10.2	4.5	1.0	0.0	0.0	0.0	0.0

**Table C 2.— ABSOLUTE VALUES OF AIR TEMPERATURE AT 2 METRES ABOVE GROUND,
ABSOLUTE MINIMUM AIR TEMPERATURE AT 5cms ABOVE GROUND OVER
DIFFERENT FIELDS.**

JANUARY 1966

STATION	Max. Temp. at 2 metres (°C)				Min. Temp. at 2 metres (°C)				Min. Temp. at 5 cms. above (°C)			
	Highest		Lowest		Highest		Lowest		Dry soil		Grass	
	Value	Date	Value	Date	Value	Date	Value	Date	Value	Date	Value	Date
El Kasr	25.4	21st	14.6	7th	13.2	21st	4.0	16th	2.9	11th	—	—
Tahrir	29.2	22nd	16.2	11th	13.5	22nd	2.8	13th	0.0	13th	—	—
Giza	26.6	22nd	16.0	25th	11.1	28th	1.6	13th	—2.9	8th	—3.3	8th
Kharga	28.7	22nd	17.2	25th	16.1	1st	1.2	15th	—1.4	14th	—	—

**Table C 3.— (SOLAR SKY) RADIATION, DURATION OF BRIGHT SUNSHINE, RELATIVE
HUMIDITY, VAPOUR PRESSURE AT 2 METRES ABOVE GROUND, EVAPORATION &
RAINFALL**

JANUARY 1966

STATION	(Solar + Sky) Radia- tion gm. cal/cm ²	Duration of Bright Sunshine (hours)			Relative Humidity %						Vapour pressure (mm)					Evapora- tion (mm)		Rainfall (mm)			
		Total Actual monthly	Total Possible monthly	%	Duration in hours		Mean of day	1200 U.T.	Lowest	Date	Mean of day	1200 U.T.	Highest	Date	Lowest	Date	Piche	Pan class A	Total Anno- nt Monthly	Max. Fall in one day	Date
					> 90%	> 80%															
El Kasr	244.2	233.2	321.5	73	—	—	66	48	20	16th	7.0	7.3	11.0	17th	3.8	21st	14.7	6.41	24.0	15.4	31st
Tahrir	308.3	220.7	322.9	68	3.0	6.0	61	37	12	22nd	6.8	6.2	11.7	22nd	2.8	17th	9.5	4.77	3.0	2.8	24th
Giza	305.5	242.0	324.1	75	2.0	5.0	62	41	18	22nd	6.6	6.5	11.6	22nd	4.0	8, 16th	7.9	3.25	4.4	2.3	29th
Kharga	334.0	314.0	334.3	94	0.0	0.4	42	27	10	18th	4.8	5.3	9.6	1st	2.3	17, 18th	11.8	6.16	0.0	0.0	—

